## ENTOMOGNATHUS FROM CHINA WITH DESCRIPTION OF A NEW SPECIES (HYMENOPTERA: SPHECIDAE)

QIANG LI<sup>1</sup> AND JUNHUA HE<sup>2</sup>

<sup>1</sup>Department of Plant Protection, Shandong Agricultural University, Taian, Shandong, 271018, P. R. China <sup>2</sup>Department of Plant Protection, Zhejiang Agricultural University, Hangzhou, Zhejiang, 310029, P. R. China

Abstract.—A key to the species of the genus Entomognathus Dahlbom from China is provided, and a new species, Entomognathus (Koxinga) aneurytibialis, is described.

Key Words.—Insecta, Hymenoptera, Sphecidae, Crabroninae, Entomognathus, China.

The genus *Entomognathus* Dahlbom has been represented by 61 species of small to medium size predatory solitary wasps, of which 12 occur in the Palaearctic, 10 in the Oriental, 25 in the Ethiopian and 14 in the Nearctic and Neotropical Regions. Bohart & Menke (1976) revised the genera of Sphecidae of the world. They provided a key to the subgenera and listed 42 species of the genus *Entomognathus*. Tsuneki (1947, 1967, 1968, 1972, 1976, 1977) studied the species and provided a key for the identification of east Asian forms. Pulawski (1978) keyed the species of the northwest Palaearctic Region. Wu and Zhou (1996) revised the species from China.

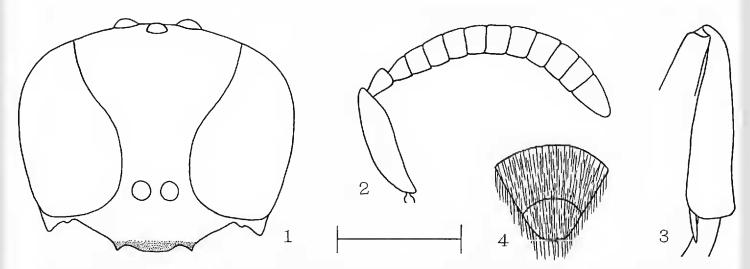
Entomognathus includes 4 subgenera, of which the subgenus Koxinga only has 6 species. In the course of a study on the fauna of Crabroninae from China, we recognize 4 species of Entomognathus, of which one belonging to the subgenus Koxinga is new to science.

## KEY TO THE SPECIES OF ENTOMOGNATHUS FROM CHINA

1.	Mesopleuron with stemaulus and verticaulus
_	Mesopleuron without sternaulus and verticaulus
2.	Hind tibia very swollen; pronotal collar, prepectus, scutellum and metan-
	otum with large yellow spots. Sichuan, Zhejiang, Taiwan
	E. (Koxinga) siraiya Pate
-	Hind tibia normal; pronotal collar, prepectus, scutellum and metanotum
	black. Yunnan E. (Koxinga) aneurytibialis Li et He, new species
3.	Propodeal enclosure enclosed by a narrow and shallow furrow; outer side
	of hind tibia with fine spines. Neimenggu
	E. (Entomognathus) sahlbergi (A. Morawitz)
_	Propodeal enclosure enclosed by a broad and deep furrow; outer side of
	hind tibia with coarse spines. Heilongjiang, Jilin, Neimenggu, Xinjiang,
	Hebei E. (Entomognathus) brevis (Vander Linden)

ENOTOMOGNATHUS (KOXINGA) ANEURYTIBIALIS, NEW SPECIES (Figs. 1–4)

*Type.*—Holotype, male, Menga, 1050–1080 m, Xishuangbanna, Yunnan Province, China, 13 Oct 1958, S. Wang; deposited: the Insect Collections of Institute of Zoology, Academia Sinica.



Figures 1–4. *Entomognathus (Koxinga) aneurytibialis*. Figure 1. Head, frontal view. Figure 2. Antenna. Figure 3. Hind tibia, lateral view. Figure 4. Pygidial plate, dorsal view (scale line for Figures 1 and 3: 0.54 mm; for Figures 2 and 4: 0.48 mm).

Body length 3.5 mm. Black; mandible except apex, anterior margin of clypeus medially, apical half of antenna beneath, pronotal lobe, trochanters to tarsi of legs, fore coxa, mid and hind coxae at apex and abdomen at apex reddish yellow; mandible at apex, antenna above and tegula dark brown; basal half of antenna beneath yellow; wing veins brown or dark brown. Eyes and body covered by white short erect hairs. Head shiny; anterior margin of clypeus (Fig. 1) slightly prominent medially; upper portion of frons densely punctate, with a shallow median furrow; vertex sparsely and finely punctate, without orbital foveae; occipital carina flanged and foveate, contiguous to hypostomal carina; head length: head width: postocellar distance: ocellocular distance = 59:100:14:15. Mandibles apically simple, acuminate, externoventral margin notched medially. Antennae (Fig. 2), relative length of scape : pedicel : flagellomere I:II:III:IV:V = 33:8:5:5.5:5.5:5.5:5.5. Thorax shiny; pronotal collar densely and finely punctate; scutum, scutellum and metanotum sparsely punctate; mesopleuron and metapleuron densely and finely punctate; propodeum densely punctate, base of propodeal enclosure with short, longitudinal rugae; posterior side of propodeum with broad, shallow median furrow, without rugae and carinae; lateral side of propodeum without rugae and carinae, with lateral propodeal carina. Forewing with R<sub>1</sub> extending beyond apex of marginal cell. Hind tibia (Fig. 3) and tarsi normal. Abdomen shiny, sparsely punctate; tergite I, length: width at posterior margin = 58:60; pygidial plate (Fig. 4) densely and coarsely punctate (Figs. 1-4).

Diagnosis.—This new species is related to E. (K.) siraiya Pate. It can be distinguished from the latter by the characters of hind tibia not swollen, posterior side and lateral side of propodeum without rugae and carinae, the shape of anterior margin of clypeus (Fig. 1), no yellow spot on thorax except the pronotal lobe which are reddish yellow, abdomen black except apex, coloration of legs as outlined in the text, and a rather smaller body.

Etymology.—The name is derived from one of its main characters: an- = not or without (originated from Greek words); -eury- = broad (originated from Greek words); -tibialis = tibial (originated from Greek words also). The hind tibia of this species is normal, not swollen and broad.

Material Examined.—See Type.

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## LITERATURE CITED

- Bohart, R. M. & A. S. Menke. 1976. Sphecid wasps of the world, a generic revision. Univ. of California Press, Berkeley, Los Angeles, London, pp. 1–695.
- Pulawski, V. V. 1978. The family Sphecidae. pp. 73–279. *In* Classification of the insects in the European part of the USSR. Volume 3. Hymenoptera. Part I. Zoological Institute Press. Leningrad. [In Russian.]
- Tsuneki, K. 1947. On the wasps of the genus *Crabro* s. 1. from Hokkaido, with descriptions of new species and subspecies (Hymenoptera). J. Fac. Sci. Hokkaido Univ., 9: 397–435.
- Tsuneki, K. 1967. Further studies on the fossorial Hymenoptera from Manchuria. Etizenia, 23: 1-17.
- Tsuneki, K. 1968. Studies on the Formosan Sphecidae (V), the subfamily Crabroninae (Hymenoptera) with a key to the species of Crabronini occurring in Formosa and Ryukyus. Etizenia, 30: 1–34.
- Tsuneki, K. 1972. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei, 280. Sphecidae (Hymenoptera). IV-V. Acta Zoologica Academiae Scientiarum Hungaricae, 18: 147–232.
- Tsuneki, K. 1976. A fourth contribution to the knowledge of Sphecidae (Hymenoptera) of Manchuria, with remarks on some species of the adjacent regions. Knotyu, Tokyo, 44: 288–310.
- Tsuneki, K. 1977. H. Sauter's Sphecidae from Formosa in the Hungarian Natural History Museum (Hymenoptera). Annales Historico-Naturales Musei Nationalis Hungarici, Tomus, 69: 261–296.
- Wu, Y. & Q. Zhou. 1996. Economic insect fauna of China, Fasc. 52. Hymenoptera: Sphecidae. Science Press, Beijing [In Chinese.], pp. 1–197.

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